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U.S. PATENT AND TRADEMARK OFFICE
BOARD OF PATENT APPEALS
AND INTERFERENCES

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte RICHARD H. HALL and THEODORE W. SELBY

Appeal No. 2005-1648
Application No. 09/172,577

ON BRIEF

Before FRANKFORT, McQUADE and NASE, Administrative Patent Judges.
McQUADE, Administrative Patent Judge.

DECISION ON APPEAL

Richard H. Hall et al. originally took this appeal from the final rejection (mailed May 2, 2001) of claims 16, 17, 19, 20, 39, 42, 43, 46, 47, 50 through 53, 61 and 68. As indicated in an earlier remand (mailed February 26, 2003), the appeal with respect to claim 68 has been dismissed in accordance with the appellants' wishes. Claims 64-67 stand allowed, and claims 62 and 63, the only other claims pending in the application, stand objected to as depending from a rejected base claim.

THE INVENTION

The subject matter on appeal relates to a method for controlling the oxidative degradation of oil. Representative claims 16, 50 and 61 read as follows:

16. A method for controlling oxidative degradation of an oleaginous liquid substance in a generally enclosed, vented space in a working machine, which comprises providing said working machine having said space; providing said oleaginous liquid substance; and blanketing said oleaginous liquid substance in said space with an inert gas blanket to control oxidative degradation of said oleaginous liquid substance.

50. A method for controlling oxidative degradation of an engine oil in a crankcase of an internal combustion engine, which comprises providing said engine, providing said engine oil to said crankcase; and blanketing said engine oil in said crankcase with an inert gas blanket to control oxidative degradation of said engine oil.

61. A method for controlling oxidative degradation of an engine oil in a crankcase of an internal combustion engine and delivering oxygen to a place away from said crankcase, which comprises providing said engine; providing said engine oil to said crankcase; providing a means for supplying an inert gas blanket of a gas enriched with nitrogen in comparison to air, which separates nitrogen and oxygen from the air to provide said inert gas blanket and provide[s] a by-product gas enriched in oxygen; providing a means for directing said inert gas blanket to said crankcase, and blanketing said engine oil in said crankcase with said inert gas blanket to control oxidative degradation of said engine oil; and providing a means for directing said by-product gas to the place away from said crankcase.

THE EVIDENCE

The items relied on by the examiner as evidence of anticipation and obviousness are:

Geyer et al. (Elizabeth) ¹	3,617,580	Nov. 02, 1971
Kopel	4,561,393	Dec. 31, 1985
Tremain et al. (Tremain)	4,594,080	Jun. 10, 1986
Gast, Jr. (Gast)	5,649,995	Jul. 22, 1997
 Fujiyama et al., Japanese Patent Document (Fujiyama) ²	 2-82304	 Mar. 22, 1990

The items relied on by the appellants as evidence of patentability are:

The joint 37 CFR § 1.132 Declarations of Richard H. Hall and Theodore W. Selby filed June 24, 2002 and August 30, 2002, respectively.

¹ Since the appellants and examiner refer to the Geyer patent as "Elizabeth," we shall do the same in this opinion for the sake of consistency and to avoid confusion.

² As the result of earlier remands, the examiner has made of record, and provided the appellants with, an English language translation of this reference.

THE REJECTIONS

Claims 16, 17, 19, 20, 39, 42, 43, 46 and 47 stand rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the appellants, at the time the application was filed, had possession of the claimed invention.

Claim 16 stands rejected under 35 U.S.C. § 102(b) as being anticipated by Kopel.

Claims 16, 17, 39 and 50 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Elizabeth in view of Fujiyama.

Claims 19, 20, 42, 43, 51-53 and 61 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Elizabeth in view of Fujiyama and Gast.

Claims 46 and 47 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Elizabeth in view of Fujiyama, Gast and Tremain.

Attention is directed to the main, reply and supplemental reply briefs (filed September 27, 2001, January 29, 2002, June 11, 2003 and November 11, 2003) and to the final rejection and main and supplemental answers (mailed May 2, 2001, October 30, 2001, April

Appeal No. 2005-1648
Application No. 09/172,577

7, 2003 and November 6, 2003) for the respective positions of the appellants and examiner regarding the merits of these rejections.³

DISCUSSION

I. The 35 U.S.C. § 112, first paragraph, rejection of claims 16, 17, 19, 20, 39, 42, 43, 46 and 47

The examiner's explanation of this rejection focuses on independent claim 16:

Claim 16 recites the limitation, "vented space in a working machine" in line 3. The space in a working machine that is vented is neither disclosed nor suggested in the specification as originally filed [final rejection, page 3].

This reasoning indicates that the rejection is based on an alleged failure of the specification to comply with the written description requirement of § 112, ¶ 1. The test for compliance with this requirement is whether the disclosure of the application as originally filed reasonably conveys to the artisan that the inventor had possession at that time of the later claimed subject matter, rather than the presence or absence of literal support in

³ In the final rejection, the 35 U.S.C. § 112, first paragraph, rejection also included claims 51-53. Upon reconsideration (see pages 4 and 5 in the main answer), the examiner has withdrawn the rejection as to these claims.

the specification for the claim language. In re Kaslow, 707 F.2d 1366, 1375, 217 USPQ 1089, 1096 (Fed. Cir. 1983).

Although the originally filed specification in this case does not contain literal support for the "vented space in a working machine" claim limitation, it does depict the appellants' invention in terms of working machines such as crankcases, gear boxes and transmissions used in conjunction with internal combustion engines, and further describes the devices to which the invention can be applied as being "generally enclosed" (pages 4 and 8) with the subject spaces therein being "substantially enclosed" (page 9). On its face, such disclosure lends at least some support for the rather broad "vented space" limitation in claim 16.⁴

The appellants (see pages 4-9 in the main brief) argue, and cite references showing, that crankcases, gear boxes and transmissions associated with internal combustion engines are known to be vented. The examiner does not dispute this. Instead, the examiner (1) notes that claim 16 is directed to a generic "working machine," (2) cites references showing the existence of working machines which are not vented to the ambient environment and (3)

⁴ The term "vent" is commonly understood to mean "[a]n opening permitting the passage or escape of a liquid, gas, or vapor" (The American Heritage Dictionary, Second College Edition (Houghton Mifflin Co. 1982)).

argues that the rejection is sound because "[i]n order to conclude that the working machines, in general, have vents, it has to be known to any person of ordinary skill in the art that vents are inherently present in all of the working machines, and not just the internal combustion engines (answer, page 6).

The examiner's position here is unpersuasive. To begin with, claim 16 pertains to a method involving a "vented space in a working machine," not a working machine which is vented to the ambient environment. Moreover, there is no basis in law for the examiner's demand for a showing of knowledge in the art that all working machines are vented. In short, the above noted portions of the original specification in this application, considered in conjunction with the appellants' showing that crankcases, gear boxes and transmissions are known to be vented, demonstrates that the disclosure as originally filed would reasonably convey to the artisan that the appellants had possession at that time of the method recited in claim 16.

Therefore, we shall not sustain the standing 35 U.S.C. § 112, first paragraph, rejection of independent claim 16 and dependent claims 17, 19, 20, 39, 42, 43, 46 and 47.

II. The 35 U.S.C. § 102(b) rejection of claim 16 as being anticipated by Kopel

Kopel discloses a sealed hydraulic valve lifter designed to protect the hydraulic fluid therein from oxidation, evaporation and contamination by foreign material (see column 1, lines 18-53). As described by Kopel with reference to Figure 2,

[i]t may be seen in the drawing, that the hydraulic valve lifter 100 comprises a piston-shell 116 that fits inside of a cylindrical cavity 102 of diameter D in the push rod cylinder 118. One state-of-the-art lubricated sealing ring 119 allows relative movement between shell and piston, yet effectively seal[s] a body of hydraulic fluid 124 inside of the lifter. Between the base of piston-shell 116 and the base of cylinder cavity 102 is left a fluid filled region that forms part of the pressure chamber 122 inside the hydraulic lifter 100.

Piston-shell 116 contains a central cylindrical cavity of diameter d, the upper portion of which constitutes the reservoir chamber 120 for an appropriate storage quantity of the hydraulic fluid 124. A pressurized inert gas is in the void space 140 above the hydraulic fluid reservoir. Check valve ball 126 allows one-way passage of the hydraulic fluid 124 from the reservoir chamber 120 into the pressure chamber 122. A valve spring 127 is provided to seat the check valve ball 126 closing the one-way valve, except when the gas pressure in void space 140 of reservoir chamber 120 overbalances spring 127 and forces the valve open. When relative movement of piston-shell 116 and cylinder 118 compress pressure chamber 122 and the pressure on the hydraulic fluid closes the one-way valve, the hydraulic fluid flows from pressure chamber 122 into reservoir chamber 120 by way of an orifice 128 [column 2, line 50, through column 3, line 8].

Anticipation is established only when a single prior art reference discloses, expressly or under principles of inherency, each and every element of a claimed invention. RCA Corp. v. Applied Digital Data Sys., Inc., 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir. 1984). It is not necessary that the reference teach what the subject application teaches, but only that the claim read on something disclosed in the reference, i.e., that all of the limitations in the claim be found in or fully met by the reference. Kalman v. Kimberly Clark Corp., 713 F.2d 760, 772, 218 USPQ 781, 789 (Fed. Cir. 1983), cert. denied, 465 U.S. 1026 (1984).

As framed and argued by the appellants (see pages 10 and 11 in the main brief), the dispositive issue with respect to this rejection is whether Kopel meets the "vented space" limitation in claim 16.⁵ According to the appellants, Kopel does not meet this limitation because it discloses a sealed, rather than a vented, system.

The appellants' argument is not well taken. The method recited in claim 16 relates to a vented space in a working machine. The reservoir chamber 120 in Kopel's piston-shell 116, which contains the pressurized inert gas and the hydraulic fluid 124,

⁵ The 37 CFR § 1.132 declarations made of record by the appellants are not relevant to this rejection.

constitutes such a space as it is vented by the check valve. Claim 16 does not contain any limitation which excludes, or is otherwise inconsistent with, the overall sealed nature of Kopel's valve lifter.

As the appellants' contention that the subject matter recited in claim 16 distinguishes over that disclosed by Kopel is unpersuasive, we shall sustain the standing 35 U.S.C. § 102(b) rejection of this claim as being anticipated by Kopel.

III. The 35 U.S.C. § 103(a) rejection of claims 16, 17, 39 and 50 as being unpatentable over Elizabeth in view of Fujiyama

Elizabeth discloses a method for inhibiting the oxidative degradation of lubricating oil as it circulates between a crankcase, an oil filter and an internal combustion engine. In essence, the method involves the treatment of the oil through contact with certain oil-insoluble solid inorganic elements disposed in the oil filter or in a separate chamber adjacent the filter.

As conceded by the examiner, Elizabeth does not respond to the inert gas limitations in independent claims 16 and 50. The examiner's reliance on Fujiyama to account for this failing is unsound.

Fujiyama discloses an oil storage tank adapted to prevent the evaporation and oxidative degradation of the oil stored therein. To this end, the tank S includes an upper cover 1, an intermediate cover N having fixed and floating portions N1 and N2 arranged to contact the upper surface of the oil, and a purging gas inlet 6 and outlet 7 for circulating an inert gas G in the space between the upper and intermediate covers.

In proposing to combine Elizabeth and Fujiyama to reject claims 16 and 50, the examiner submits that it would have been obvious "to modify the solid form of oil oxidation treatment of Elizabeth with the method of providing inert gas of Fujiyama et al. in order to provide a longer lasting system that controls oxidative degradation so that the cost of maintenance can be reduced" (final rejection, page 5). The combined teachings of Elizabeth and Fujiyama, however, offer no support for the examiner's conjecture about such durability and cost advantages. Although both references pertain generally to the problem of oxidative oil degradation, they propose markedly different solutions to this problem in significantly dissimilar settings. The only suggestion for combining these disparate teachings in the manner proposed by the examiner stems from hindsight knowledge impermissibly derived from the appellants' disclosure.

Appeal No. 2005-1648
Application No. 09/172,577

Consequently, we shall not sustain the standing 35 U.S.C. § 103(a) rejection of independent claims 16 and 50, and dependent claims 17 and 39, as being unpatentable over Elizabeth in view of Fujiyama.

IV. The 35 U.S.C. § 103(a) rejection of claims 19, 20, 42, 43, 51-53 and 61 as being unpatentable over Elizabeth in view of Fujiyama and Gast

For the reasons expressed above, the combined teachings of Elizabeth and Fujiyama would not have suggested a method meeting the inert gas limitations in independent claims 16 and 50 or the corresponding limitations in independent claim 61. The examiner's application of Gast does not overcome this deficiency.

Accordingly, we shall not sustain the standing 35 U.S.C. § 103(a) rejection of independent claim 61, and dependent claims 19, 20, 42, 43 and 51-53, as being unpatentable over Elizabeth in view of Fujiyama and Gast.

Appeal No. 2005-1648
Application No. 09/172,577

V. The 35 U.S.C. § 103(a) rejection of claims 46 and 47 as being unpatentable over Elizabeth in view of Fujiyama, Gast and Tremain

Since the examiner's citation of Tremain does not cure the foregoing shortcomings of Elizabeth, Fujiyama and Gast relative to the subject matter recited in parent claim 19, we shall not sustain the standing 35 U.S.C. § 103(a) rejection of dependent claims 46 and 47 as being unpatentable over Elizabeth in view of Fujiyama, Gast and Tremain.

SUMMARY


The decision of the examiner to reject claims 16, 17, 19, 20, 39, 42, 43, 46, 47, 50 through 53 and 61 is affirmed with respect to claim 16 and reversed with respect to claims 17, 19, 20, 39, 42, 43, 46, 47, 50 through 53 and 61.


Appeal No. 2005-1648
Application No. 09/172,577

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a)(1)(iv).

AFFIRMED-IN-PART

Charles E. Frankfort
CHARLES E. FRANKFORT
Administrative Patent Judge


JOHN P. McQUADE
Administrative Patent Judge


JEFFREY V. NASE
Administrative Patent Judge

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Appeal No. 2005-1648
Application No. 09/172,577

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